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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/810,151

03/26/2004

Liang Liu

8373

25859

7590

10/06/2005

WEI TE CHUNG
FOXCONN INTERNATIONAL, INC.
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EXAMINER

HINES, ANNE M

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

5K

Office Action Summary	Application No.	Applicant(s)	
	10/810,151	LIU ET AL.	
	Examiner	Art Unit	
	Anne M. Hines	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/26/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/26/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 18 refers to both the roots and the tips of arrays of carbon nanotubes. These terms are not defined in the specification and it is unclear what these terms refer to. Applicant is advised that no amendment shall introduce new matter into the disclosure of the invention. See 35 U.S.C. 132(a).

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-18 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-18 of copending Application No. 10/811414 (US 20040192153). This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

US Application 10/810151	Co-pending US Application 10/811414	Reasons for rejecting under Double Patenting
Claim 1	Claim 1	Co-pending application 10/811414 claims: A method for making a carbon nanotube-based field emission display comprising steps of: providing an insulative layer having a first surface; depositing a layer of catalyst on the first surface of the insulative layer; forming a spacer having a plurality of openings therein such that patterned areas of the layer of catalyst are exposed in the openings, forming arrays of carbon nanotubes extending from the layer of catalyst in the patterned areas; forming cathode electrodes on tops of the arrays of carbon nanotubes; forming gate electrodes on a second, opposite surface of the insulative layer offset from the patterned areas; removing portions of the insulative layer corresponding to the arrays of carbon nanotubes so as to expose the arrays of carbon nanotubes; and attaching an anode electrode having a phosphor screen to the above obtained structure.

Claim 2	Claim 2	Co-pending application 10/811414 claims: The method as described in claim 1, wherein a flatness of the first surface of the insulative layer is less than 1 micron.
Claim 3	Claim 3	Co-pending application 10/811414 claims: The method as described in claim 1, wherein a thickness of the insulative layer is in the range from 1 micron to 1000 microns.
Claim 4	Claim 4	Co-pending application 10/811414 claims: The method as described in claim 3, wherein the thickness of the insulative layer is in the range from 10 microns to 200 microns.
Claim 5	Claim 5	Co-pending application 10/811414 claims: The method as described in claim 1, wherein a thickness of the catalyst layer is in the range from 1 nanometer to 10 nanometers.
Claim 6	Claim 6	Co-pending application 10/811414 claims: The method as described in claim 1, wherein the spacer is made of heatproof glass, insulative material coated metal, silicon, silicon oxide, ceramic or mica.

Claim 7	Claim 7	Co-pending application 10/811414 claims: The method as described in claim 1, wherein a height of the spacer is in the range from 1 micron to 1 mm.
Claim 8	Claim 8	Co-pending application 10/811414 claims: The method as described in claim 8, wherein the height of the spacer is in the range from 10 microns to 500 microns.
Claim 9	Claim 9	Co-pending application 10/811414 claims: The method as described in claim 1, wherein a height of the arrays of carbon nanotubes is approximately equal to that of the spacer.
Claim 10	Claim 10	Co-pending application 10/811414 claims: The method as described in claim 1, wherein each cathode electrode further includes a negative feedback layer.

Claim 11	Claim 11	<p>Co-pending application 10/811414 claims: A method for making a carbon nanotube-based field emission display comprising steps of: providing an insulative layer having a first surface; depositing a protective layer on the insulative layer; depositing a layer of catalyst on the protective layer; forming a spacer having a plurality of openings therein such that patterned areas of the layer of catalyst are exposed in the openings, forming arrays of carbon nanotubes extending from the layer of catalyst in the patterned areas, forming a cathode electrode on a top of each of the arrays of carbon nanotubes; forming a base having an inner contour mates with an outer contour of the cathode electrodes and the spacer so as to couple to the cathode electrodes and spacer; forming gate electrodes on a second, opposite surface of the insulative layer offset from the patterned areas; removing portions of the protective layer and the insulative layer corresponding to the arrays of carbon nanotubes so as to expose the arrays of carbon nanotubes; and attaching an anode electrode having a phosphor screen to the above obtained structure .</p>
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Claim 12	Claim 12	Co-pending application 10/811414 claims: The method as described in claim 11, wherein a flatness of the first surface of the insulative layer is less than 1 micron.
Claim 13	Claim 13	Co-pending application 10/811414 claims: The method as described in claim 11, wherein a thickness of the insulative layer is in the range from 1 micron to 1000 microns.
Claim 14	Claim 14	Co-pending application 10/811414 claims: The method as described in claim 11, wherein a thickness of the protective layer is in the range from 10 nanometers to 100 nanometers.
Claim 15	Claim 15	Co-pending application 10/811414 claims: The method as described in claim 11, wherein the insulative layer and the protective layer are removed by wet etching and dry etching respectively.
Claim 16	Claim 16	Co-pending application 10/811414 claims: The method as described in claim 11, wherein a thickness of the layer of catalyst is in the range from 1 nanometer to 10 nanometers.

Claim 17	Claim 17	Co-pending application 10/811414 claims: The method as described in claim 11, wherein the method further includes a step of cleaning the exposed surface of the arrays of carbon nanotubes after removing the portions of the protective layer and the insulative layer.
Claim 18	Claim 18	Co-pending application 10/811414 claims: A method of making a carbon nanotube-based field emission display, comprising steps of: providing a catalyst layer; growing arrays of carbon nanotubes on said catalyst layer with roots of said arrays of carbon nanotubes extending therefrom; providing a barrier beside said arrays of carbon nanotubes; applying a cathode electrode upon tips of said growing arrays of carbon nanotubes under a condition that the cathode electrode is supported by said barrier; removing portions of said catalyst layer around said roots; providing a gate electrode around said roots; and locating an anode electrode spatially away from said roots opposite to said cathode electrode.

Art Unit: 2879

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne M. Hines whose telephone number is (571) 272-2285. The examiner can normally be reached on Monday through Friday from 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anne M Hines
Patent Examiner
Art Unit 2879

AmH
9/26/06

Msig 9/29/05
MARICELI SANTIAGO
PRIMARY EXAMINER